WHAT IS CLAIMED IS:

1. A carbon-based composite particle for an electron emission source, comprising:

a particle comprising a material selected from the group consisting of metals, oxides, ceramic materials, and combinations thereof; and

a carbon-based material which is partially embedded within the particle and which partially protrudes from the surface of the particle.

2. The carbon-based composite particle for an electron emission source according to claim 1, wherein the particle is selected from the group consisting of Ag, Al, Ni, Cu, Zn, SiO_2, MgO, TiO_2, and Al_2O_3.

3. The carbon-based composite particle for an electron emission source according to claim 1, wherein the carbon-based material is selected from the group consisting of carbon nanotubes, diamond, diamond-like carbon, graphite, and carbon black.

4. The carbon-based composite particle for an electron emission source according to claim 1, wherein the carbon-based material occupies at least 30% of the entire surface area of the composite particle

5. An electron emission source comprising a plurality of carbon-based composite particles according to claim 1.

6. The electron emission source according to claim 5, wherein the electron emission source has a surface roughness of at least 10Å.

7. The electron emission source according to claim 6, wherein the electron emission source has a surface roughness of between 10Å and 10μm.

8. An electron emission source of a field emission display device comprising an aggregate of carbon-based composite particles, each comprising:

a particle comprising a material selected from the group consisting of metals, oxides, ceramic materials and combinations thereof; and

a carbon-based material which is partially embedded within the particle and which partially protrudes from the surface of the particle.

9. The electron emission source according to claim 8, wherein the particle is selected from the group consisting of Ag, Al, Ni, Cu, Zn, SiO_2, MgO, TiO_2, and Al_2O_3.

10. The electron emission source according to claim 8, wherein the carbon-based material is selected from the group consisting of carbon nanotubes, diamond, diamond-like carbon, graphite, and carbon black.

11. The electron emission source according to claim 8, wherein the carbon-based material occupies at least 30% of the entire surface area of the composite particle.

12. The electron emission source according to claim 8, wherein the electron emission source has a surface roughness of at least 10Å.

13. The electron emission source according to claim 8, wherein the electron emission source has a surface roughness of between 10Å and 10μm.

14. A composite particle for an electron emission source, comprising:

a particle comprising a material selected from the group consisting of metals, oxides, ceramic materials, and combinations thereof; and

a material of a cylindrical shape which is partially embedded within the particle and which partially protrudes from the surface of the particle.

15. The composite particle for an electron emission source according to claim 14, wherein the particle is selected from the group consisting of Ag, Al, Ni, Cu, Zn, SiO_2, MgO, TiO_2, and Al_2O_3.

16. The composite particle for an electron emission source according to claim 14, wherein the material of a cylindrical shape is one or more nanotubes.

17. The composite particle for an electron emission source according to claim

14, wherein the material of a cylindrical shape occupies at least 30% of the entire surface area of the composite particle

18. An electron emission source comprising a plurality of the composite particles according to claim 1.

19. The electron emission source according to claim 18, wherein the electron emission source has a surface roughness of at least 10Å.

20. The electron emission source according to claim 19, wherein the electron emission source has a surface roughness of between 10Å and 10μm.

21. A method of preparing a carbon-based composite particle for an electron emission source, comprising:

a) dissolving a metal particle precursor in a solvent to obtain a solution;

b) adding a carbon-based material to the solution and mixing the solution; and

c) reducing the metal particle precursor to generate and grow a metal particle, wherein the carbon-based material is partially embedded within the metal particle and partially protrudes from the surface of the metal particle.

22. The method of preparing a carbon-based composite particle for an electron emission source according to claim 21, wherein the metal particle precursor is a metal salt.

23. The method of preparing a carbon-based composite particle according to claim 22, wherein the metal salt is a salt comprising a metal selected from the group consisting of Ag, Al, Ni, Cu, and Zn.

24. The method of preparing a carbon-based composite particle according to claim 21, wherein the carbon-based material is selected from the group consisting of carbon nanotubes, diamond, diamond-like carbon, graphite, and carbon black.

25. A method of preparing a carbon-based composite particle for an electron emission source comprising:

a) dispersing a surfactant in a nonpolar solvent to provide a first solution;

b) dispersing a carbon-based material in a nonpolar solvent comprising a metal salt to provide a second solution;

c) mixing the first solution and the second solution to provide a micelle and a reverse micelle and adding a reducing agent to generate and grow a metal particle; and

d) heating the micelle or the reverse micelle and removing the nonpolar solvent and the surfactant.

26. The method of preparing a carbon-based composite particle according to claim 25, wherein the concentration ratio of the first solution to the second solution is between 0.5 and 30.

27. The method of preparing a carbon-based composite particle according to claim 15, wherein the metal salt is a salt comprising a metal selected from the group consisting of Ag, Al, Ni, Cu, and Zn.

28. The method of preparing a carbon-based composite particle according to claim 25, wherein the carbon-based material is selected from the group consisting of carbon nanotubes, diamond, diamond-like carbon, graphite, and carbon black.

29. A method of preparing a carbon-based composite particle comprising:

a) dispersing a carbon-based material in a solution of a metal particle precursor or an inorganic particle precursor to provide a dispersed solution;

b) generating a droplet using the dispersed solution; and

c) passing the droplet through a high temperature tubular reactor using an inert carrier gas to pyrolize the droplet and form the carbon-based composite particle wherein the carbon-based material is partially embedded within the inside of the metal particle or the inorganic particle and partially protrudes from the surface of the metal particle or the inorganic particle.

30. The method of preparing a carbon-based composite particle according to claim 29, wherein the droplet is generated by an ultrasonic sprayer, a nozzle device, or a gaseous sprayer.

31. The method of preparing a carbon-based composite particle according to claim 29, wherein the metal particle precursor is a metal salt.

32. The method of preparing a carbon-based composite particle according to claim 31, wherein the metal salt is selected from the group consisting of Ag, Al, Ni, Cu, and Zn.

33. The method of preparing a carbon-based composite particle according to claim 29, wherein the inorganic particle precursor is a silicon alkoxide.

34. The method of preparing a carbon-based composite particle according to claim 29, wherein the carbon-based material is selected from the group consisting of carbon nanotubes, diamond, diamond-like carbon, graphite, and carbon black.

35. The method of preparing a carbon-based composite particle according to claim 29, wherein the metal particle precursor or the inorganic particle precursor is present in an amount from 0.001 to 10 M in the solution.

36. A composition for forming an electron emission emitter comprising a plurality of carbon-based composite particles according to claim 1.

37. A composition for forming an electron emission emitter comprising a plurality of carbon-based composite particles prepared by the method of claim 21.

38. A field emission display device comprising an electron emission source prepared by print-coating the composition for forming an electron emission emitter according to claim 36.

39. A field emission display device comprising an electron emission source prepared by print-coating the composition for forming an electron emission emitter according to claim 37.

40. A method of preparing an electron emission source comprising:

introducing a dispersed solution comprising a plurality of carbon-based

composite particles according to claim 1, a solvent, and a dispersing agent to an ultrasonic container; and

installing an electrode plate and a patterned cathode electrode spaced from one another in the ultrasonic container and applying a voltage thereto to deposit the composite particle on the cathode electrode.

41. A method of preparing an electron emission source comprising:

introducing a dispersed solution comprising a plurality of carbon-based composite particles prepared by the method of claim 21, a solvent, and a dispersing agent to an ultrasonic container; and

installing an electrode plate and a patterned cathode electrode spaced from one another in the ultrasonic container and applying a voltage thereto to deposit the composite particle on the cathode electrode.